

APPENDIX N

SUPPORTING INFORMATION
FOR SOLID WASTE

SOLID WASTE

Impact Analysis

The following are the calculations used to estimate debris generated during proposed demolition and construction of military family housing.

Estimated pounds of waste generated each year from demolition:

For house on concrete slab: $77.6\text{lbs/sq ft} \times 274,214\text{ sq ft} = 21,279,006\text{lbs}$
 $21,279,006\text{lbs} \times 1\text{ ton}/2000\text{ lbs} = 10,640\text{ tons}$

An estimate of 77.6 lbs/sq ft of debris generated during residential demolition based on sampling studies is documented in “*Characterization of Building-Related Construction and Demolition Debris In The United States*” (prepared by Franklin Associates for U.S. Environmental Protection Agency, June 1998).

The 77.6 lbs is derived from 39.6 tons of debris from a basic house (1600 sq ft average size house used as a basis for calculation), plus 22.5 tons of concrete debris from the slab. The total, 62.1 tons, is divided by 1600 sq ft and multiplied by 2000 lbs/ton to equal 77.6 lbs/sq ft.

274,214 sq ft is the estimated total square footage proposed for demolition in 2005. This was derived from the number and size of homes scheduled for demolition and construction per year (Table 2-3 Projected Timeline Scenario for Demolition and Construction Activities Under the Proposed Action). An average square footage was calculated for each size home (e.g. JNCO 2-bedroom homes range from 781sq ft to 1410 sq ft. The average square footage is 1132 sq ft).

Estimated pounds of waste generated each year from new construction:

Total square footage of new construction per year $\times 4.38\text{ lbs/sq ft} = x\text{ lbs of debris}$.

$535,840\text{ sq ft} \times 4.38\text{ lbs/sq ft} = 2,346,979\text{ lbs} \times 1\text{ ton}/2000\text{ lbs} = 1173\text{ tons of debris}$.

4.38 lbs per sq ft is an estimate of debris generated during residential construction based on sampling studies documented in “*Characterization of Building-Related Construction and Demolition Debris In The United States*” (prepared by Franklin Associates for U.S. Environmental Protection Agency, June 1998).

535,840 sq ft is the amount of square footage based on the size and number of homes proposed for new construction in Year 2005 as specified in Table 2-3 Projected Timeline Scenario for Demolition and Construction Activities Under the Proposed Action. The maximum gross square footage for each size home was used (Table 2-2 Estimated Total Gross Square Footage of C&D for the Proposed Action).

Max Gross Sq Ft for JNCO 2 bdrm house (1500 sq ft) $\times 200\text{ new homes} = 300,000\text{ sq ft}$.

Management Requirements for Solid Waste Handling

- Materials such as wood and scrap metal and wiring would need to be disposed of at a Class III landfill designated for this type material.
- Cut vegetation would not be placed into the solid waste stream (dumpsters or roll-offs). It may be taken to the wood yard on Eglin Main or to the closed Wright Landfill.
- Waste should be recycled, especially wood and scrap metal/wiring, to the maximum extent possible.
- Coordinate structural, irrigation, backflow preventer, and stormwater designs with AAC/EMCE to ensure compliance and to determine the requirements for permitting under these projects.

References:

Franklin Associates, 1998. *“Characterization of Building-Related Construction and Demolition Debris in the United States.”* Prepared by Franklin Associates for U.S. Environmental Protection Agency, June 1998.